Small Business Innovation Research/Small Business Tech Transfer

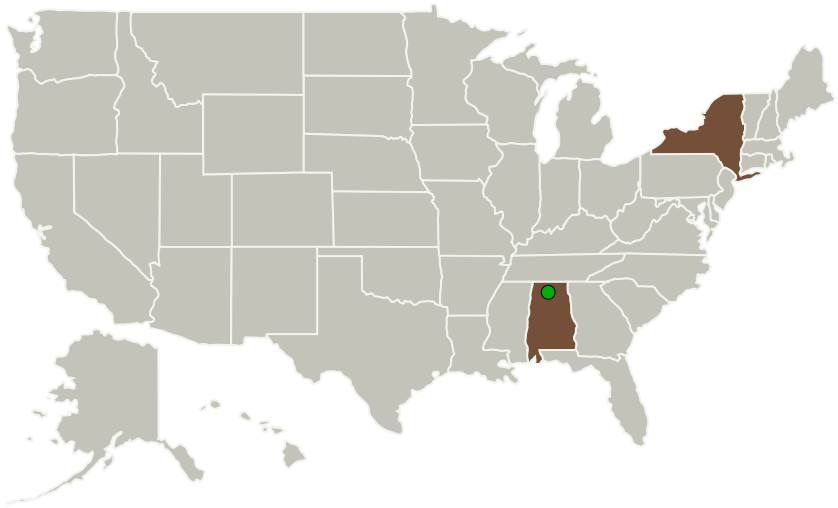
Removing Mid-Spatial Frequency Errors on Curved Surfaces with VIBE, Phase I

Completed Technology Project (2011 - 2011)

Project Introduction

The Optimax VIBE process is a full-aperture, conformal polishing process incorporating high frequency motion that rapidly removes sub-surface damage in a VIBE pre-polish step and eliminates mid-spatial frequency (MSF) errors created by deterministic polishing in a VIBE finishing step. This Phase I feasibility study will focus on the VIBE finishing step to remove undesirable MSF errors while at the same time maintaining the desired low spatial frequency form accuracy.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
Optimax Systems, Inc.	Lead Organization	Industry	Ontario, New York
Marshall Space Flight Center(MSFC)	Supporting Organization	NASA Center	Huntsville, Alabama

Primary U.S. Work Locations	
Alabama	New York

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Project Transitions

February 2011: Project Start

September 2011: Closed out

Closeout Documentation:

- Final Summary Chart*(https://techport.nasa.gov/file/138461)*

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

Optimax Systems, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Jessica D Nelson

Co-Investigator:

Jessica Nelson

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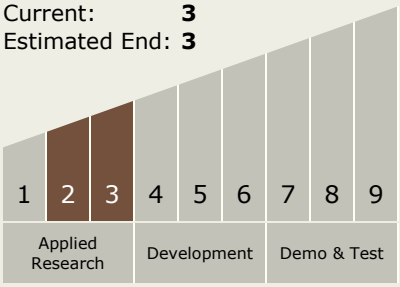
Technology Maturity (TRL)

Start: **2**
Current: **3**
Estimated End: **3**



Technology Areas

Primary:

- TX12 Materials, Structures, Mechanical Systems, and Manufacturing
  - TX12.5 Structural Dynamics
    - TX12.5.2 Vibroacoustics

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System